

CLAIMS

1 Thermoforming multilayer film comprising, successively:

- 5 • at least one layer chosen from layers (A1) and (A2) and such that, if (A2) is present, then (A2) is placed next to the optional layer (B1),
- optionally a layer (B1),
- a layer (B2),
- 10 • a layer (B3)
- and optionally a layer (B4),

in which

- the layer (A1) comprises a fluoropolymer (A11) or a polymer (A12) consisting essentially of alkyl (meth)acrylate units or a blend of the two,
- 15 • the layer (A2) consists of ink,
- the layer (B1) comprises a fluoropolymer (B11) or a polymer (B12) consisting essentially of alkyl (meth)acrylate units or a blend of the two,
- 20 • the layer (B2) is based on polyamide with amine end groups,
- the layer (B3) consists of a polyolefin functionalized with an unsaturated carboxylic anhydride,
- and the layer (B4) is made of polyolefin.

25 2 Film according to Claim 1, in which the layer (A1) is replaced with two layers (A11) and (A12), the order of the layers being as follows:

- (A11) / (A12) / optional (A2) / optional (B1) / (B2) / (B3) / optional (B4),

- the layer (A11) comprises a fluoropolymer (A111) or a polymer (A112) consisting essentially of alkyl (meth)acrylate units or a blend of the two,
- the layer (A12) comprises, by weight, 0 to 50% of a fluoropolymer (A111) and 50 to 100% of a polymer (A112) consisting essentially of alkyl (meth)acrylate units.

3 Film according to either of the preceding claims, in which the fluoropolymer (B111) and (A111) is PVDF.

4 Film according to any one of the preceding claims, in which the polymer (B112) and (A112) is PMMA.

5 Film according to any one of the preceding claims, in which the polyamide of the layer (B2) is chosen from PA 6, PA 12 and PA 6/6-6, these polyamides containing amine end groups.

6 Film according to any one of the preceding claims, in which the functionalized polyolefin of the layer (B3) is grafted polypropylene optionally diluted with polypropylene, EPR rubber, EPDM rubber or copolymers of propylene and of an α -olefin.

7 Film according to any one of Claims 1 to 5, in which the functionalized polyolefin of the layer (B3) results from a co-grafting of a blend of polypropylene and of EPR or EPDM.

8 Film according to any one of Claims 1 to 5, in which the functionalized polyolefin of the layer (B3) is a blend comprising, by weight:

- 0 to 50% and preferably 10 to 40% of at least one polyethylene or one ethylene copolymer,

- 50 to 100% and preferably 60 to 90% of at least one polymer chosen from polypropylene or a propylene copolymer, poly(1-butene) homopolymer or copolymer and polystyrene homopolymer or copolymer, and preferably polypropylene,

- this blend being grafted with an unsaturated carboxylic anhydride,

- this grafted blend optionally being diluted in at least one polyolefin essentially comprising propylene units
5 or in at least one polymer of elastomeric nature or in a blend thereof.

9 Film according to any one of the preceding claims, in which the polyolefin of the layer (B4) is polypropylene.

10 10 Substrate coated with a film according to any one of the preceding claims, in which the layer (B3) or the layer (B4), if it exists, is next to the substrate.

11 Substrate according to Claim 10, consisting of polypropylene.